



2911.0.55.002 - Discussion Paper: Census of Population and Housing - ABS Views on 2011 Census Output Geography, 2011

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Summary

Introduction

INTRODUCTION

The Australian Bureau of Statistics (ABS) is to replace the Australian Standard Geographical Classification (ASGC) with the new Australian Statistical Geography Standard (ASGS) commencing in 2011. The Census of Population and Housing is a key source of high quality statistical data for small geographic areas. The move to the new classification will lead to improvements in the quality of small area time series data from the Census and will enable better comparison between Census and other data sources that adopt the new geographic classification.

The purpose of this paper is to:

- inform census users of the geographical areas for which data from the 2011 Census will be available, and
- seek user views on the range of products that will be available for the various levels of the ASGS (refer to [Tables 1 and 2](#) of this publication).

Statistics from the 2011 Census will be released using the ASGS. For 2011, time series data will be available at the Statistical Local Area (SLA).

The smallest geographical unit of the ASGS for which full 2011 Census statistics will be published will be the Statistical Area Level 1 (SA1). The SA1 will be composed of aggregates of Mesh Blocks (MB) and will be of slightly smaller average size than a 2006 Collection District (CD). SA1s will aggregate to form the higher level units in the main structure of the ASGS.

Data for Mesh Blocks will be published with Usual Resident population and total dwelling counts, as they were for the 2006 Census. Statistics based on user defined aggregations of Mesh Blocks will not be available.

The ASGS, with improved geographical resolution, will provide statistics of comparable or better quality for most non-ABS geographies that were previously derived from whole CDs. These will include Local Government Areas (LGAs), suburbs, postal areas and Commonwealth and State electoral divisions. The ASGS will also offer users a more stable and consistent output geography that is based on land use and population ranges to optimise output. Whereas the old CD-based geography was designed for ease of collection of census forms.

Provide Feedback

PROVIDE FEEDBACK

Users are invited to comment on the ASGS implementation plans for the 2011 Census of Population and Housing. Submissions can be forwarded electronically to census.software@abs.gov.au or in hardcopy to Director, Census Products and Services, Australian Bureau of Statistics, Locked Bag 10 Belconnen ACT 2616.

The closing date for submissions is Friday 30th April 2010.

A paper describing the full range of products and services following the 2011 Census of Population and Housing will be released for comment in the first half of 2010. ASGS implementation plans for other ABS

statistical collections will be announced at a later date.

Background

BACKGROUND

In July 2008 the ABS announced in Information Paper, Outcomes from the Review of the Australian Standard Geographical Classification (cat no 1216.0.55.002) that the ASGC was to be replaced. The ABS has undertaken extensive user consultation on the geography standard and further information is available in this information paper.

The new ASGS separates the spatial regions into two broad categories:

- *ABS structures*: those regions which are defined and maintained by the ABS, and
- *non-ABS structures*: those regions defined and maintained by other organisations, but for which the ABS supplies data.

One of the advantages of the new ASGS is the improved consistency and stability of units over time. The ABS structures in the new standard will not change substantially between Censuses. This is particularly important for the five yearly Census program as it will improve the quality of time series data from the Census and enable better comparison between Census and non-Census data.

The ASGS uses Mesh Blocks as the building block for this new geography, with Statistical Area Level 1 (SA1) being the first level of aggregation of Mesh Blocks into a standard output geographic unit.

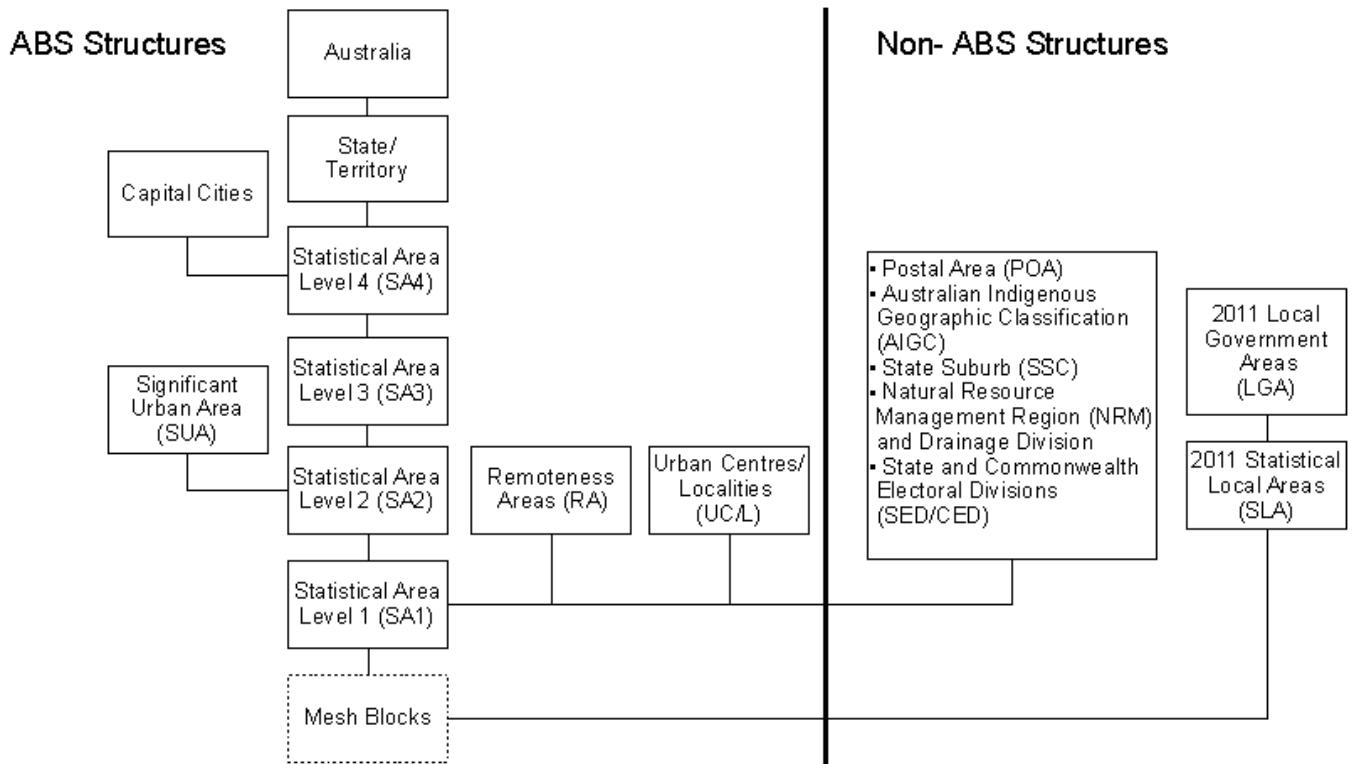
It is expected that the ASGS boundaries will be available in December 2010. These will be made available from the ABS website in the same way as the current ASGC boundaries are published.

2011 Census Geographic Hierarchy

2011 CENSUS GEOGRAPHIC HIERARCHY

The diagram below depicts the output geographies for the 2011 Census of Population and Housing:

Structure of the 2011 Census Geography



Note: Capital cities are subject to change and there will be further consultation in March/April 2010.

The Statistical Area Level 1 (SA1) unit has been designed to be the lowest level of geography for which most census data will be available. It is a slightly smaller and more consistent sized unit than the Collection District (CD). The SA1 will be designed with a population of around 400 persons for urban areas and 300 persons for rural areas. There will be approximately 55,000 SA1s for the 2011 Census compared to approximately 39,000 CDs for the 2006 Census.

The ASGC used in previous censuses produced anomalies when producing statistics for some geographic areas as CDs were primarily designed for the purpose of collecting Census data and not for disseminating it. The new ASGS was designed to produce high quality statistics and will provide either comparable or better quality statistics for most Census geographies. The SA1 unit has been designed specifically for output and should more accurately reflect the regions it is designed to represent.

There will be an intercensal review of the non-ABS structures in the lead up to the 2016 Census.

Sample SA1 and SA2 Boundaries

SAMPLE SA1 AND SA2 BOUNDARIES

Note: all Statistical Area level boundaries and provisional and are subject to change.

Canberra, Australian Capital Territory

Adelaide, South Australia

South Coast, New South Wales

Western, Northern Territory

Comparison Between New and Old Output Geography

COMPARISON BETWEEN NEW AND OLD OUTPUT GEOGRAPHY

The following diagram compares the main structures of both the new and old geographies, as well as the number of spatial units at each level:

2011 Census (ASGS)	2006 Census (ASGC)
Australia	Australia
State/Territory	State/Territory
(9)	(9)
Statistical Area Level 4	Statistical Division
(80)	(69)
Statistical Area Level 3	Statistical Subdivision
(220)	(217)
Statistical Area Level 2	Statistical Local Area
(2,200)	(1,426)
Statistical Area Level 1	Collection District
(55,000)	(38,704)

Note: the number of SA1s, SA2s, SA3s and SA4s are a provisional estimate only.

The above diagram shows that use of the ASGS will result in an improvement in the geographical resolution of the standard output available from the Census.

Mesh Blocks

MESH BLOCKS

Mesh Blocks are used as the basis for processing census data and the ASGS, however most output geographies will be built from whole SA1s. Basic information on the Usual Resident population and total dwelling counts will be published at Mesh Block level for 2011. No other information for individual Mesh Block areas will be available. As with all census output, small random adjustments will be made to the basic Mesh Block information to allow the maximum amount of detailed Census data to be released without breaching confidentiality. This randomisation, along with respondent and processing error, has a greater impact on small area data, such as Mesh Blocks, than on larger areas.

The 2006 Census was the first time the ABS attempted to code census data to Mesh Block. These counts were experimental and not subject to the same rigorous quality assurance that were applied to all other census data. The design of the 2006 Mesh Block boundaries was also experimental and there have been significant changes to the boundaries for 2011.

For the 2011 Census users will not be able to request statistics based on user defined regions that are aggregated from Mesh Blocks. The ABS, will however, store mesh block coded data in anticipation of this functionality being made available in the lead up to the 2016 Census.

Support for the Australian Standard Geographical Classification (ASGC) and Time Series

SUPPORT FOR THE AUSTRALIAN STANDARD GEOGRAPHICAL CLASSIFICATION (ASGC) AND TIME SERIES

The change in classification means there will be an unavoidable break in time series. For the 2011 Census the ABS will assist users to move to the ASGS while still meeting needs for time series data. The Statistical Local Area (SLA) is not a defined region in the new ASGS but will be available for the 2011 Census. The SLA is a transitional unit to allow for comparison to the 2006 Census and will not be available for 2016. Census data for

Local Government Areas (LGAs) will continue to be made available for the 2016 Census and beyond.

It should be noted that time series data from the 2011 Census will be available for Australia, States and Territories, 2011 SLAs and 2011 LGAs. The lowest level of time series data available from the census as standard output has been the SLA and this remains unchanged for 2011.

To also assist users transition to the new geography, the ABS will continue to publish the ASGC up until 2011 and the ABS invites you to comment on levels of the ASGC geography you would like to continue to see made available as standard output for the 2011 Census. It should be noted however, that Collection Districts have not been developed for the 2011 ASGC and will not be available as output from the 2011 Census. This includes time series, as data quality at the CD was considered to be of insufficient quality for comparison over time.

The 2011 Census marks the beginning of a new improved time series. A series that is based on a more stable and consistent geographic standard. More information on the new time series will be available in the lead up to the 2016 Census.

Socio-Economic Indexes for Areas (SEIFA)

SOCIO-ECONOMIC INDEXES FOR AREAS (SEIFA)

SEIFA will continue to be released as part of the Census output program. For the 2011 Census the SA1 will be the smallest SEIFA area available. SEIFA should not be used for time series comparison. However, SEIFA scores will be constructed and released for non-ABS structures to assist users transition to the ASGS.

A separate information paper on SEIFA will be published closer to the 2011 Census.

Place of Work

PLACE OF WORK

In previous censuses, information on Place of Work has been released as standard output at the SLA. The comparable unit in the ASGS is the SA2. The Census will be consistent with other survey data that will be released at the SA4 level including labour force data. So users will continue to be able to compare Census data with data from the Labour Force Survey.

Address 1 and 5 Years Ago

ADDRESS 1 AND 5 YEARS AGO

Similar to Place of Work, both Address 1 Year Ago and Address 5 Years Ago data have previously been released as standard output at the SLA. The standard output for the 2011 Census will be the SA2, which is the comparable unit in the ASGS.

2011 Census Output Program

2011 CENSUS OUTPUT PROGRAM

The following table shows the range of products that may be available for the various levels of the ASGS. The ABS invites users to comment on the proposed range of products that will be available for the various levels of the ASGS.

Note that all 2006 products are subject to review for the 2011 Census Output Program. A paper outlining the

proposed products and services from the 2011 Census will be released mid-2010.

Table One - ABS Structures

* CDATA Online includes Census Tables and MapStats

** The decision as to whether there will be an Expanded Community profile released for 2011 or whether some of the more detailed

tables usually associated with the Expanded profile will be included in the Basic Community profile has not yet been finalised. If the Expanded Community profile is released for 2011 the levels of data available for output will be the SA2 level and aggregates of SAs, again in line with the levels of detail available for previous years.

Table Two. Non ABS Structures

	Basic and Expanded**	O	P	P	P	O	P	O	O
	Place of Enumeration	O	P	P	P	O	P	O	O
	Indigenous	O	P	O	O	P	O	O	O
	Time Series	P	P	O	O	O	O	O	O
	Working Population	O	P	O	O	O	O	O	P
	Digital Boundaries	P	P	P	P	P	P	O	O
	Estimated Resident Population	O	P	O	O	O	O	O	O
SEIFA		to be advised							
Census Sample File		to be advised							

* CDATA Online includes Census Tables and MapStats

** The decision as to whether there will be an Expanded Community profile released for 2011 or whether some of the more detailed tables usually associated with the Expanded profile will be included in the Basic Community profile has not yet been finalised.

If the Expanded Community profile is released for 2011 the levels of data available for output will be the SA2 level and aggregates of SA2s only, in line with the level of detail available for previous censuses.

*** Place of Work will be released at SA2

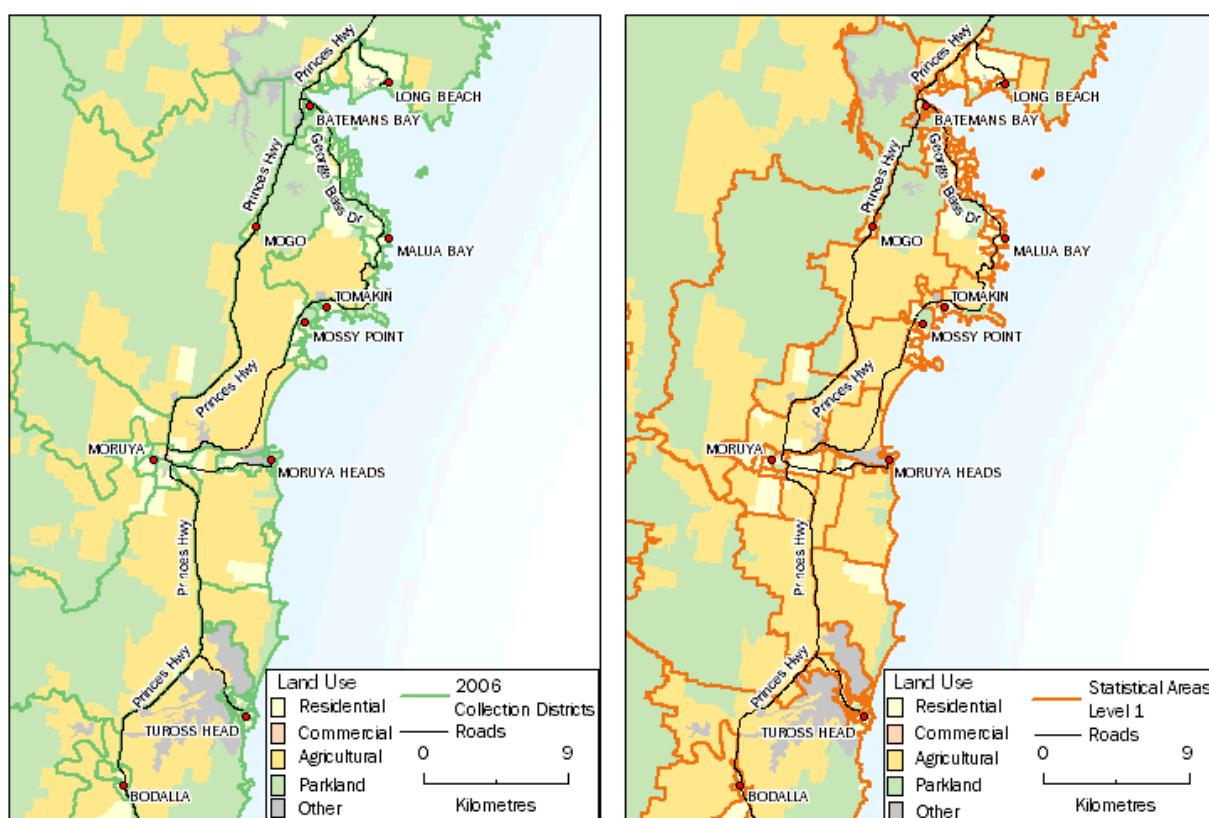
South Coast, New South Wales

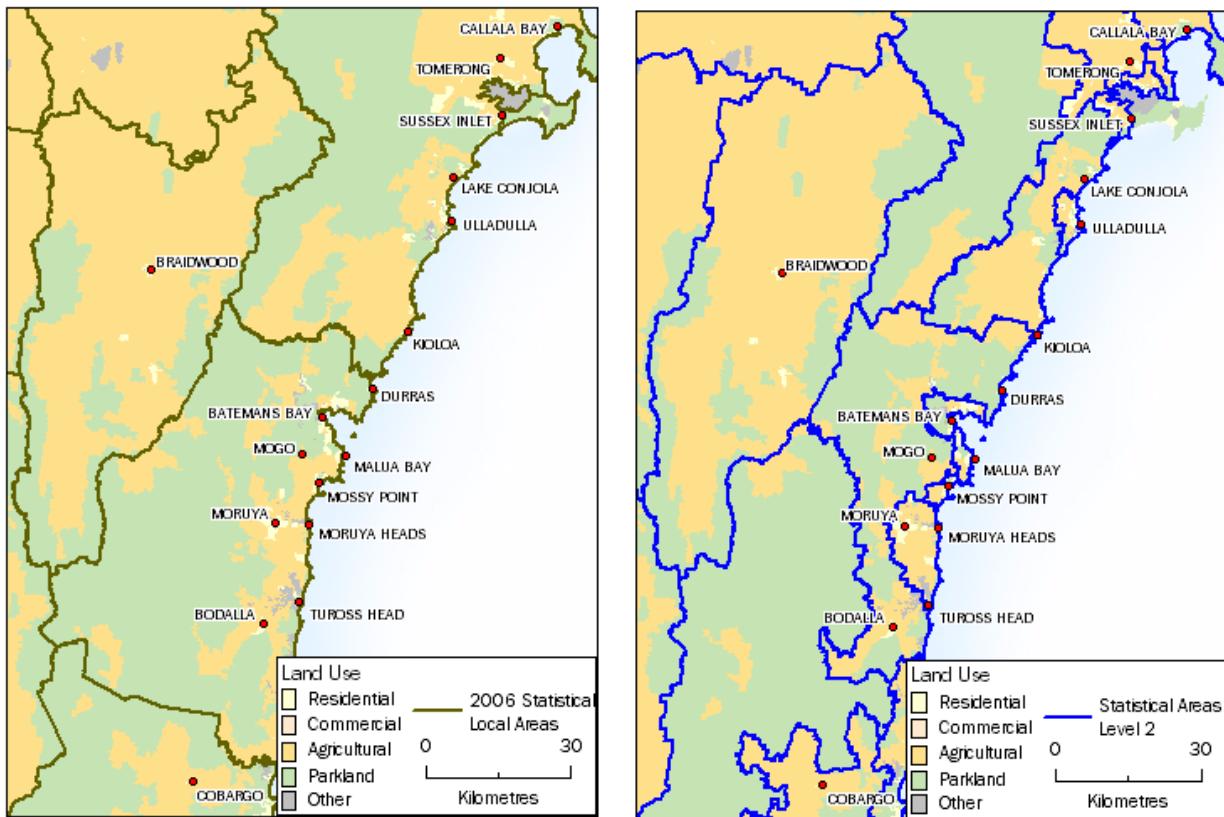
SAMPLE SA1 AND SA2 BOUNDARIES

Note: all Statistical Area level boundaries and provisional and are subject to change.

SOUTH COAST, NEW SOUTH WALES

A comparison of 2006 SLAs and preliminary SA2 boundaries on the south coast of New South Wales highlighting the increased number of SA2 units and their better discrimination of functional areas such as Batemans Bay.





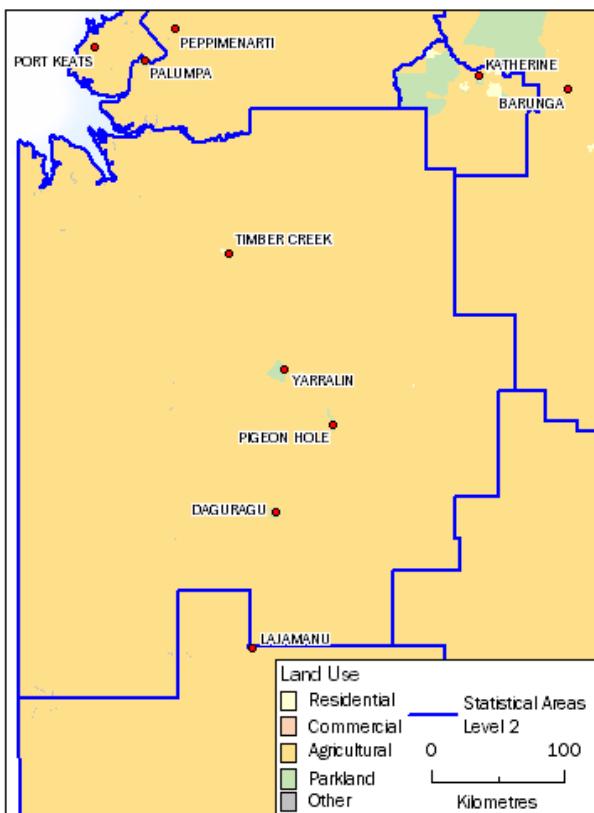
Northern Territory

SAMPLE SA1 AND SA2 BOUNDARIES

Note: all Statistical Area level boundaries and provisional and are subject to change.

NORTHERN TERRITORY

In remote areas the principle difference between the ASGC and the ASGS is associated with the exclusion of small SLAs at the SA2 level. For example, the communities of Timber Creek, Yarralin, Pigeon Hole and Daguragu are delineated as 2006 SLAs due to their status as Community Government Council (CGC). In the ASGS structure these areas are not of sufficient population size to be defined as SA2s and are therefore incorporated within the SA1 geography.



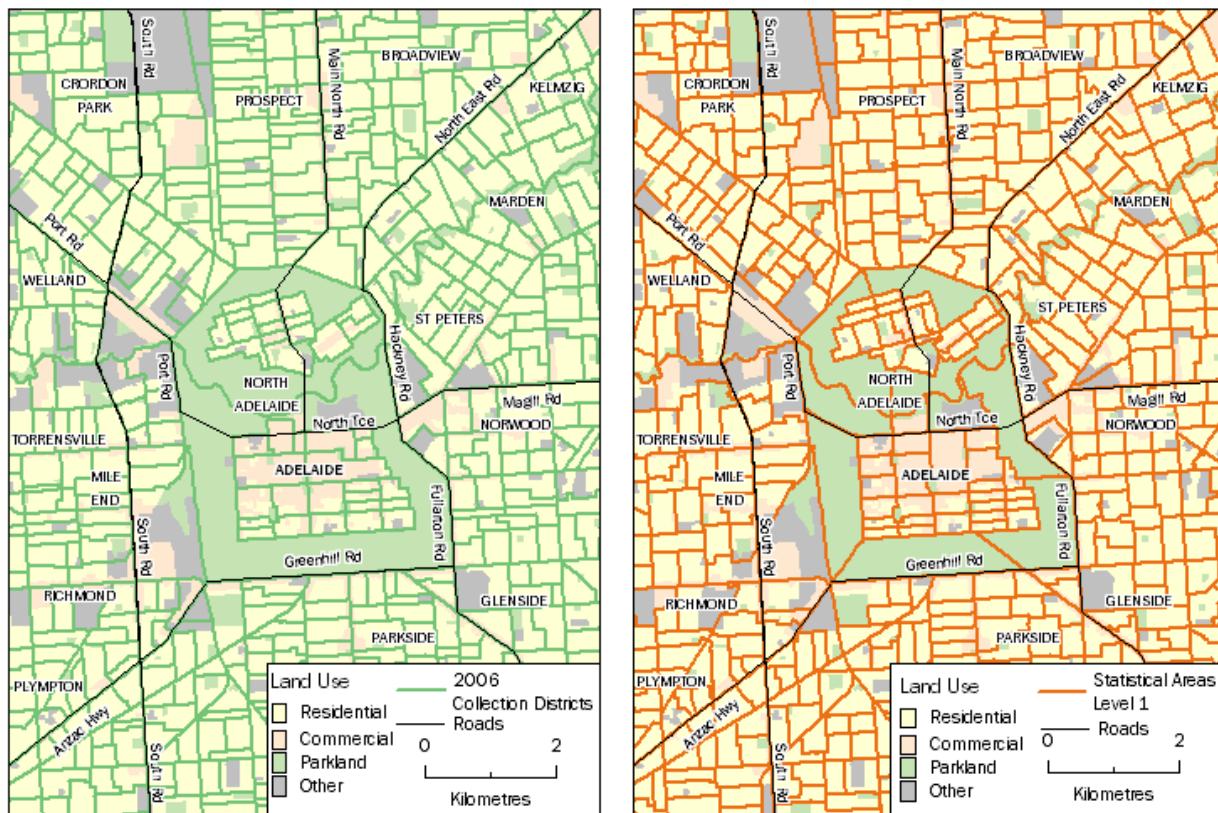
Adelaide, South Australia

SAMPLE SA1 AND SA2 BOUNDARIES

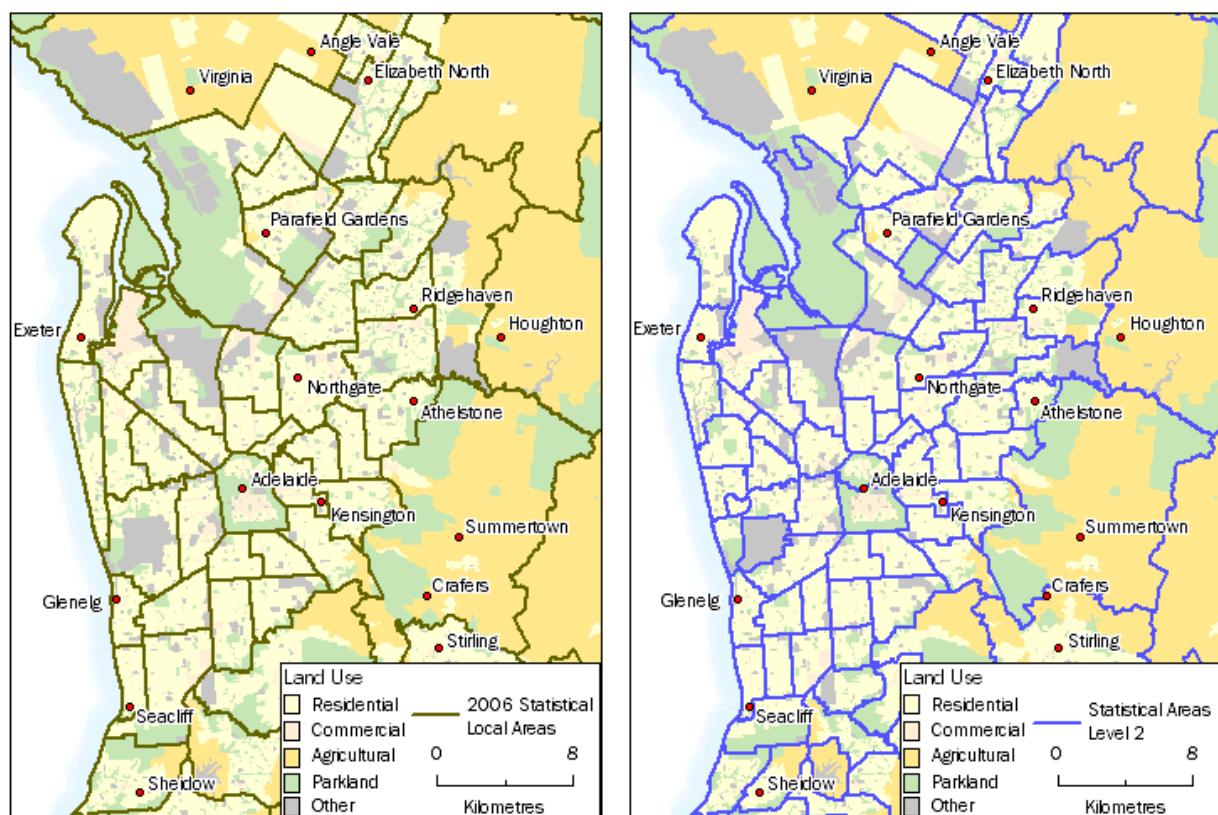
Note: all Statistical Area level boundaries and provisional and are subject to change.

ADELAIDE, SOUTH AUSTRALIA

Maps illustrating the differences between 2006 Collection Districts and preliminary 2011 Statistical Area 1 units in central Adelaide. In general in urban areas there is a good correspondence between 2006 CDs and preliminary 2011 SA1s.



The map below shows a comparison of 2006 Statistical Local Areas and preliminary Statistical Area Level 2 boundaries in Adelaide. This map highlights the increased number of SA2 units and their better discrimination of functional areas such as Adelaide airport.



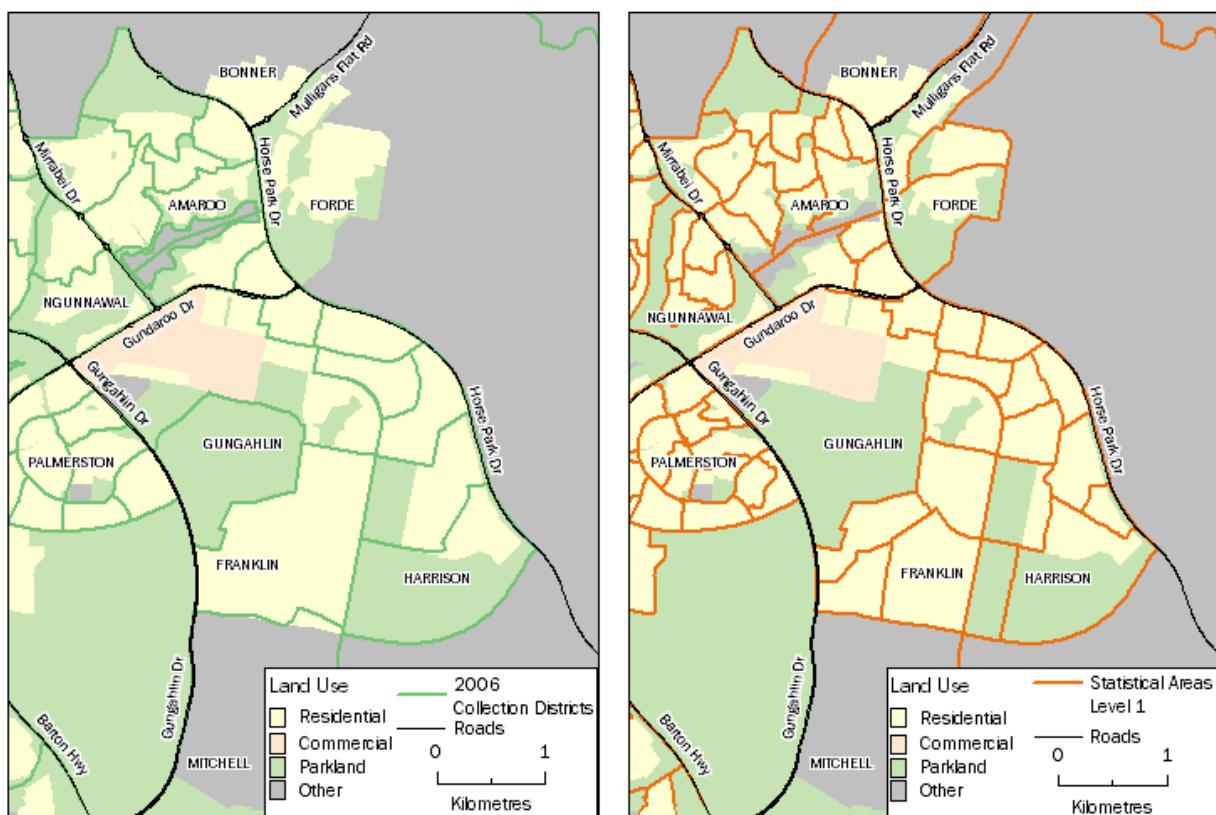
Canberra, Australian Capital Territory

SAMPLE SA1 BOUNDARIES

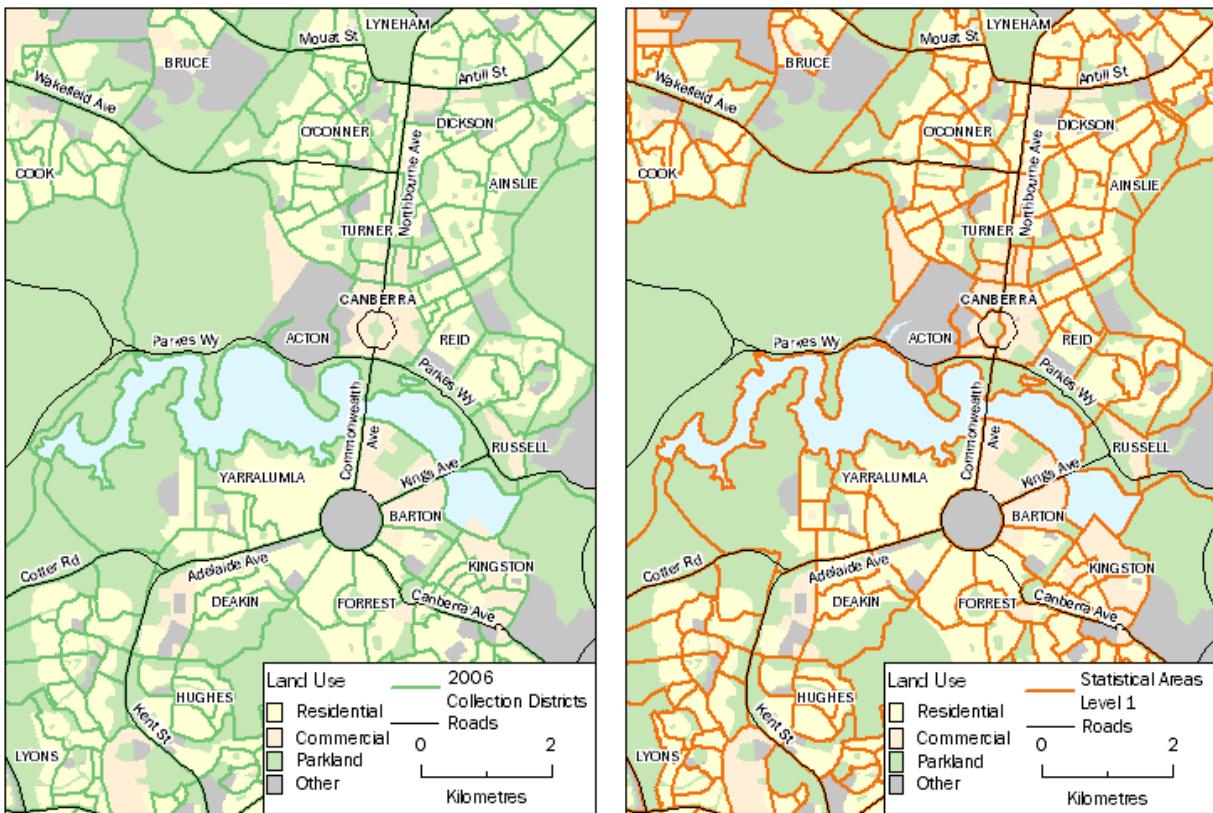
Note: all Statistical Area level boundaries and provisional and are subject to change.

CANBERRA, AUSTRALIAN CAPITAL TERRITORY

A pair of maps that illustrate the affect of recent housing development on the SA1 design in Gungahlin, ACT. The suburbs of Franklin and Harrison have experienced extensive housing development since 2006. To accommodate this growth in dwelling numbers, additional SA1 have been created in these areas.



Maps of central Canberra comparing 2006 Collection Districts and preliminary 2011 Statistical Areas Level. SA1s representing water bodies, parks and administrative areas tend to remain similar to the 2006 CDs.



About this Release

This publication announces plans for the implementation of the Australian Statistical Geography Standard (ASGS) for the 2011 Census of Population and Housing.

Users are invited to provide feedback on the Census products and services that will be available for the new geographic areas as defined in the ASGS.

Explanatory Notes

Abbreviations

ABBREVIATIONS

The following abbreviations are used in this publication:

AIGC	Australian Indigenous Geographical Classification
ABS	Australian Bureau of Statistics
ASGC	Australian Standard Geographical Classification
ASGS	Australian Statistical Geography Standard
CED	Commonwealth Electoral Division
CD	Collection District
LGA	Local Government Area
MB	Mesh Block
NRM	Natural Resource Management (Region)
POA	Postal Area
POW	Place of Work
SA1	Statistical Area Level 1
SA2	Statistical Area Level 2
SA3	Statistical Area Level 3

SA4	Statistical Area Level 4
SED	State Electoral Division
SEIFA	Socio-Economic Indexes for Areas
SLA	Statistical Local Area
SSC	State Suburb
STE	State/Territory

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